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| 10/586,770 | 08/18/2008 | Roland Durand | 1022702-000322 | 7817 |

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| EXAMINER |
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ROBITAILLE, JOHN P

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| ART UNIT | PAPER NUMBER |
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1744

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| NOTIFICATION DATE | DELIVERY MODE |
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01/20/2011

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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| | | | |
|------------------------------|---------------------------------------|--------------------------------------|--|
| Office Action Summary | Application No. 10/586,770 | Applicant(s) DURAND ET AL. | |
| | Examiner John P. Robitaille | Art Unit 1744 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 18 August 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 16-30 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 16-30 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 20 July 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Drafts, Person's Patent Drawing, Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>08/18/08</u> . | 6) <input type="checkbox"/> Other: _____ |

This first action on the merits is responsive to the application for patent received 18 August 2008. Claims 16-30 are pending.

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claim 16-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent 3,755,249 to Fujita et al. (hereafter '249).

3. Regarding claim 16, '249 teaches a process for the manufacture of nonwoven surfaces by direct melt spinning of filaments of a composition based on thermoplastic polymers comprising the steps of: a) feeding the composition to a plurality of spinnerets each comprising several spinning orifices (C8L60), b) feeding the filaments to a pneumatic attenuation device (C9L20) and a stage in which the filaments obtained are formed into a sheet (C3L50), wherein the composition based on thermoplastic polymers comprises a polymeric matrix and/or a modifying polymeric additive comprising repeat units corresponding to the following general formulae: I, II, III, IV in which: R1, R2, R3 and R4, which are identical or different, represent aliphatic, cycloaliphatic or aromatic hydrocarbon chains comprising from 2 to 18 carbon atoms, R5 represents a polyether radical with a molecular weight of between 400 and 200 000, A and B represent the CO, NH or O groups ; when A represents CO, B represents NH or O and vice versa, With

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the further proviso that the polymeric matrix comprises at least one of the repeat units I or II and at least one of the repeat units III or IV when the additive is absent or does not comprise repeat units of formulae III or IV (C4L22).

4. '249 teaches all of the claimed limitations save for the number of carbon atoms in the carbon chain. It would have been obvious to the artisan of ordinary skill in the art to modify the prior art range of 10-30 atoms (C4L26) to the claimed range since it has been held that where the claimed ranges overlap or lie within the prior art disclosure a *prima facie* case of obviousness exists. One of ordinary skill would have been motivated to alter the prior art range for the benefit of adjusting the size of the polyamide moiety.

5. Regarding claim 17, '249 teaches the process wherein the modifying polymeric additive is present in the composition at a concentration by weight of between 1% and 30% of the total composition (ABSTRACT).

6. '249 teaches all of the claimed limitations save for the additive concentration. It would have been obvious to the artisan of ordinary skill in the art to modify the prior art range of 1-30% by weight (ABSTRACT) to the claimed range since it has been held that where the claimed ranges overlap or lie within the prior art disclosure a *prima facie* case of obviousness exists. One of ordinary skill would have been motivated to alter the prior art range for the benefit of adjusting the antistatic propensity of the final fibers.

7. Regarding claim 18, '249 teaches the process wherein the modifying polymeric additive is present in the composition at a concentration by weight of between 1% and 15% of the total composition (ABSTRACT).

8. Claim 19, 20, 22-30 are rejected under 35 U.S.C. 103(a) as being unpatentable over '249 as applied to claim 16 above, and further in view of U.S. Patent Application Publication 2004/0242788 to La Grande et al. (04/788 hereafter).

9. Regarding claim 19, the previous art combination does not teach claimed additive monomer precursors.

10. In the same field of endeavor, polyamide yarn manufacture, 04/788 teaches a modifying polymeric additive obtained by polymerization of the following monomers: V, VI, VII and VIII in which R₁, R₂ and R₃, which are identical or different, represent aliphatic, cycloaliphatic or aromatic hydrocarbon chains comprising from 2 to 18 carbon atoms, R₅ represents a polyether radical with a molecular weight of between 400 and 200 000, B represents the COOH, NH₂ or OH functional groups, in the presence of a monofunctional chain-limiting compound (0038-0039) for the benefit of making a more workable thermoplastic. It would have been obvious to a person of ordinary skill in the art at the time of invention to combine the teachings of '249 with those of 04/788 for the benefit of improving the workability of the thermoplastic.

11. Regarding claim 20, '249 does not teach a chain limiting group.

12. In the same field of endeavor, 04/788 teaches the process wherein the chain limiting agent is selected from the group consisting of monofunctional amines (0052) for the benefit of terminating the chain. It would have been obvious to a person of ordinary skill in the art at the time of invention to combine the teachings of '249 with those of 04/788 for the benefit of improving the workability of the thermoplastic.

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13. Regarding claim 22, the previous art combination discloses the claimed invention concentration except for the concentration. It would have been obvious to modify the prior art since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering optimal or workable ranges of a result effective variable involves only routine skill in the art. One would have been motivated to select the claimed concentration of formula VIII for the benefit of lengthening the chain.

14. Regarding claim 23, '249 teaches the process wherein the modifying polymeric additive comprises: at least one thermoplastic block (C2L45) and at least one polyoxyalkylene block (C1L30).

15. Regarding claim 24, '249 does not discuss star or "H" shaped chains.

16. In the same field of endeavor, 04/788 teaches the process wherein the modifying polymeric additive comprises: at least one thermoplastic polymer block formed by: a star or H macromolecular chain comprising at least one polyfunctional core and at least one branch or one segment of thermoplastic polymer connected to the core, the core comprising at least three identical reactive functional groups, and/or a linear macromolecular chain comprising a difunctional core and at least one segment of thermoplastic polymer connected to the core, and at least one polyoxyalkylene block connected to at least a portion of the reactive ends of the thermoplastic polymer block (0057) for the benefit of improving the workability of the plastic. It would have been obvious to a person of ordinary skill in the art at the time of invention to combine the teachings of '249 with those of 04/788 for the benefit of improving the workability of the plastic.

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17. Regarding claim 25, '249 does not teach star or "H" chains.

18. In the same field of endeavor, 04/788 teaches the process according wherein the bonding between the thermoplastic polymer blocks are: at least one free end of the star or H macromolecular chain, chosen from the thermoplastic polymer branch or segment ends and the ends of the polyfunctional core, is connected to a poly(alkylene oxide) block, and/or at least one free end of the linear macromolecular chain, chosen from the thermoplastic polymer segment ends and the ends of the difunctional core, is connected to a poly(alkylene oxide) block; the two free ends of the linear macromolecular chain being connected to poly(alkylene oxide) blocks when the thermoplastic polymer block comprises macromolecular chains solely of linear type (0057) for the benefit of improving the workability of the plastic. It would have been obvious to a person of ordinary skill in the art at the time of invention to combine the teachings of '249 with those of 04/788 for the benefit of improving the workability of the plastic.

19. Regarding claim 26, '249 does not teach star polyamides.

20. In the same field of endeavor, 04/788 teaches the process according to Claim 25, wherein the star macromolecular chain is a star polyamide obtained by copolymerization from a mixture of monomers comprising: a polyfunctional compound comprising at least three identical reactive functional groups being an amine functional group or a carboxylic acid functional group, monomers of following general formulae (Xa) and/or (Xb) (0094) and optionally, monomers of following general formula (IX) in which: Z represents a functional group identical to the reactive functional groups of the polyfunctional compound, R12 and R6 represent identical or different, substituted or

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unsubstituted, aliphatic, cycloaliphatic or aromatic hydrocarbon radicals which have from 2 to 20 carbon atoms and optionally having heteroatoms, Y is a primary amine functional group when X represents a carboxylic acid functional group, or Y is a carboxylic acid functional group when X represents a primary amine functional group (0094)) for the benefit of improving the workability of the plastic. It would have been obvious to a person of ordinary skill in the art at the time of invention to combine the teachings of '249 with those of 04/788 for the benefit of improving the workability of the plastic.

21. Regarding claim 27, the previous art combination discloses the claimed invention concentration except for the concentration. It would have been obvious to modify the prior art since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering optimal or workable ranges of a result effective variable involves only routine skill in the art. One would have been motivated to select the claimed concentration of formula III and/or IV for the benefit of lengthening the chain.

22. Regarding claim 28, '249 does not teach lactams or diacid monomers

23. In the same field of endeavor, 04/788 teaches wherein the repeat units of formula III and/or IV originate from the reaction between a polyoxyalkylene monomer comprising two reactive terminal functional groups with a diacid monomer or a lactam (0006) for the benefit of improving the workability of the plastic. It would have been obvious to a person of ordinary skill in the art at the time of invention to combine the teachings of '249 with those of 04/788 for the benefit of improving the workability of the plastic.

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24. Regarding claim 29, '249 teaches the process wherein the repeat unit of formula I is obtained by reaction between a diacid selected from the group consisting of succinic acid, adipic acid, terephthalic acid, isophthalic acid, dodecanedioic acid and their mixtures and a diamine selected from the group consisting of hexamethylenediamine, 2-methylpentamethylenediamine and meta- xylylenediamine (C3L55-C4L10).

25. Regarding claim 30, '249 does not teach the claimed group.

26. In the same field of endeavor, 04/788 teaches the process wherein the repeat unit of formula II is obtained by polycondensation of lactams or amino acids selected from the group consisting of caprolactam, aminoundecanoic acid and aminododecanoic acid (0006) for the benefit of improving the workability of the plastic. It would have been obvious to a person of ordinary skill in the art at the time of invention to combine the teachings of '249 with those of 04/788 for the benefit of improving the workability of the plastic.

27. Claim 21 rejected under 35 U.S.C. 103(a) as being unpatentable over '249 in view of 04/788 as applied to claim 20 above, and further in view of U.S. Patent 5,959,069 to Gluck et al. ('069 hereafter).

28. Regarding claim 21, the previous art combination does not teach the claimed species.

29. In the same field of endeavor, '069 teaches the process wherein the monofunctional compounds is acetic acid, propionic acid, or benzylamine (C4L10-C4L20) for the benefit of terminating the chain. It would have been obvious to a person

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of ordinary skill in the art at the time of invention to combine the teachings of '249 with those of 04/788 for the benefit of improving the workability of the thermoplastic.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to John P. Robitaille whose telephone number is (571) 270-7006. The examiner can normally be reached on Monday to Thursday from 8:00 AM to 4:00 PM. The examiner can also be reached on alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Yogendra Gupta can be reached on (571) 272-1316. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Yogendra N Gupta/
Supervisory Patent Examiner, Art Unit 1791

JPR